

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 88. (Canceled)

89. (Currently Amended) A method for configuring a graphical user interface (GUI) element to subscribe to a data source, the method comprising:

during creation of a graphical program,

displaying a first GUI element in a the graphical program on a display of a first computer system, wherein the graphical program comprises a plurality of interconnected nodes which visually indicate functionality of the graphical program;

receiving user input specifying a data source with which to associate the first GUI element;

in response to said receiving user input, automatically configuring the first GUI element to receive data from the specified data source;

executing the graphical program, wherein said executing comprises:

receiving data from the specified data source, wherein the data includes information specifying a first data type of the data;

automatically determining that the first GUI element cannot display data of the first data type;

automatically displaying a second GUI element in the graphical program in place of the first GUI element in response to said determining that the first GUI element cannot display data of the first data type, wherein the second GUI element can display data of the first data type, wherein the first GUI element is no longer displayed;
and

displaying the received data from the specified data source on the second GUI element.

90. (Previously Presented) The method of claim 89,

wherein the data source is located remotely from the first computer system and is coupled to the first computer system over a network, wherein the data source is specified using a URL; and

wherein said automatically configuring the first GUI element to receive data from the specified data source comprises:

automatically configuring the first GUI element to connect to the data source.

91. (Previously Presented) The method of claim 89, wherein the first GUI element is automatically configured without user programming.

92. (Previously Presented) The method of claim 89, wherein the first GUI element is automatically configured without user input specifying source code.

93. (Previously Presented) The method of claim 89,

wherein said receiving user input specifying the data source comprises receiving user input via a user interface dialog box.

94. (Canceled)

95. (Previously Presented) The method of claim 89,

wherein the data source is comprised in a second computer system remotely located from the first computer system, wherein the first computer system is operable to connect to the second computer system over a network; and

wherein said automatically configuring the first GUI element to receive data from the specified data source comprises automatically configuring the first GUI element to connect to the second computer.

96. (Previously Presented) The method of claim 89,

wherein said displaying the first GUI element in the graphical program comprises displaying the first GUI element in a user interface of the graphical program; and

wherein said user input specifying the data source is received during development of the graphical program.

97. (Previously Presented) The method of claim 96, wherein, during execution of the graphical program, the first GUI element is operable to perform said receiving data from the specified data source.

98. (Canceled)

99. (Canceled)

100. (Previously Presented) The method of claim 89, wherein the data source is one from the group consisting of:

- an HTTP server;
- an FTP server;
- an OPC server;
- an SNMP server;
- a DataSocket server; and
- a file.

101. (Previously Presented) The method of claim 89,

wherein the data source is a remote data source associated with a remote computer; and

wherein said automatically configuring the first GUI element comprises automatically configuring the first GUI element to connect to the remote data source and receive data from the remote data source during execution of the graphical program.

102. (Currently Amended) The method of claim ~~101~~ 89, further comprising:

executing a computer program operable to publish live data to the remote data source;

wherein said first GUI element receiving data from the remote data source comprises the first GUI element receiving the live data.

103. (Previously Presented) The method of claim 89,
wherein the data is live data.

104. (Previously Presented) The method of claim 103,
wherein the live data comprises live measurement data.

105. (Currently Amended) A computer-readable memory medium that stores program instructions for configuring a graphical user interface (GUI) element to subscribe to a data source, wherein the program instructions are computer-executable to implement:

during creation of a graphical program,
displaying a first GUI element in ~~a~~ the graphical program on a display of a first computer system, wherein the graphical program comprises a plurality of interconnected nodes which visually indicate functionality of the graphical program;
receiving user input specifying a data source with which to associate the first GUI element;
in response to said receiving user input, automatically configuring the first GUI element to receive data from the specified data source;
executing the graphical program, wherein said executing comprises:
receiving data from the specified data source, wherein the data includes information specifying a first data type of the data;
automatically determining that the first GUI element cannot display data of the first data type;
automatically displaying a second GUI element in the graphical program in place of the first GUI element in response to said determining that the first GUI element cannot display data of the first data type, wherein the second GUI element can display data of the first data type, wherein the first GUI element is no longer displayed;
and

displaying the received data from the specified data source on the second GUI element.

106. (Currently Amended) A method for configuring a graphical user interface (GUI) element to subscribe to a data source, the method comprising:

during creation of a graphical program,

displaying a first GUI element in a the graphical program on a display of a first computer system, wherein the graphical program comprises a plurality of interconnected nodes which visually indicate functionality of the graphical program;

receiving user input specifying a data source with which to associate the first GUI element;

in response to said receiving user input, automatically configuring the first GUI element to receive and display data from the specified data source;

executing the graphical program, wherein said executing comprises:

receiving data from the specified data source, wherein the data includes information specifying a first data type of the data;

automatically determining if the first GUI element in the graphical program can display data of the first data type; and

displaying information in the graphical program to indicate an invalid condition if the first GUI element cannot display data of the first data type.

107. (Previously Presented) The method of claim 106,

wherein the data source is located remotely from the first computer system and is coupled to the first computer system over a network, wherein the data source is specified using a URL; and

wherein said automatically configuring the first GUI element to receive and display data from the specified data source comprises:

automatically configuring the first GUI element to connect to the data source.

108. (Previously Presented) The method of claim 106, wherein the first GUI element in the graphical program is automatically configured without user programming.

109. (Previously Presented) The method of claim 106, wherein the first GUI element in the graphical program is automatically configured without user input specifying source code.

110. (Previously Presented) The method of claim 106,
wherein said receiving user input specifying the data source comprises receiving user input via a user interface dialog box.

111. (Previously Presented) The method of claim 106,
wherein said automatically determining if the first GUI element can display data of the first data type comprises determining that the first GUI element can display data of the first data type;
wherein the method further comprises the first GUI element displaying the data from the specified data source.

112. (Previously Presented) The method of claim 106,
wherein the data source is comprised in a second computer system remotely located from the first computer system, wherein the first computer system is operable to connect to the second computer system over a network; and
wherein said automatically configuring the first GUI element comprises automatically configuring the first GUI element to connect to the second computer.

113. (Previously Presented) The method of claim 106,
wherein said displaying the first GUI element in the graphical program comprises displaying the first GUI element in a user interface of the graphical program; and
wherein said user input specifying the data source is received during development of the graphical program.

114. (Previously Presented) The method of claim 113, wherein, during execution of the graphical program, the first GUI element is operable to perform said receiving data from the specified data source.

115. (Previously Presented) The method of claim 113, further comprising:

starting execution of the graphical program after said automatically configuring the first GUI element, wherein executing the graphical program includes the first GUI element performing said receiving data from the specified data source.

116. (Canceled)

117. (Previously Presented) The method of claim 106, wherein the data source is one from the group consisting of:

- an HTTP server;
- an FTP server;
- an OPC server;
- an SNMP server;
- a DataSocket server; and
- a file.

118. (Previously Presented) The method of claim 106,

wherein the data source is a remote data source associated with a remote computer; and

wherein said automatically configuring the first GUI element comprises automatically configuring the first GUI element to connect to the remote data source and receive and display data from the remote data source during execution of the graphical program.

119. (Currently Amended) The method of claim ~~118~~ 106, further comprising:

executing a computer program operable to publish live data to the remote data source;

wherein the first GUI element is operable to display the live data.

120. (Previously Presented) The method of claim 106,
wherein the data is live data.

121. (Previously Presented) The method of claim 120,
wherein the live data comprises live measurement data.

122. (Currently Amended) A computer-readable memory medium that stores program instructions for configuring a graphical user interface (GUI) element to subscribe to a data source, wherein the program instruction are computer-executable to implement:

displaying a first GUI element in a graphical program on a display of a first computer system, wherein the graphical program comprises a plurality of interconnected nodes which visually indicate functionality of the graphical program;

receiving user input specifying a data source with which to associate the first GUI element;

in response to said receiving user input, automatically configuring the first GUI element to receive and display data from the specified data source;

receiving data from the specified data source, wherein the data includes information specifying a first data type of the data;

automatically determining if the first GUI element in the graphical program can display data of the first data type; and

displaying information in the graphical program to indicate an invalid condition if the first GUI element cannot display data of the first data type;

wherein the method is performed during creation of the graphical program and prior to execution of the graphical program.

123. (Canceled)

124. (Canceled)

125. (Previously Presented) The method of claim 89,
wherein the graphical program includes a user interface portion and a block diagram portion;
wherein the block diagram portion includes the plurality of interconnected nodes;
wherein said displaying the first GUI element in the graphical program comprises displaying the first GUI element in the user interface portion of the graphical program.

126. (Previously Presented) The method of claim 106,
wherein the graphical program includes a user interface portion and a block diagram portion;
wherein the block diagram portion includes the plurality of interconnected nodes;
wherein said displaying the first GUI element in the graphical program comprises displaying the first GUI element in the user interface portion of the graphical program.

127. (Previously Presented) The method of claim 106,
wherein said displaying information in the graphical program to indicate the invalid condition if the first GUI element cannot display data of the first data type comprises displaying the information proximally to the first GUI element in the graphical program.

128. (New) A method for configuring a graphical user interface (GUI) element to subscribe to a data source, the method comprising:

displaying a first GUI element in a graphical program on a display of a first computer system, wherein the graphical program comprises a plurality of interconnected nodes which visually indicate functionality of the graphical program;

receiving user input specifying a data source with which to associate the first GUI element;

in response to said receiving user input, automatically configuring the first GUI element to receive data from the specified data source;

receiving data from the specified data source, wherein the data includes information specifying a first data type of the data;

automatically determining that the first GUI element cannot display data of the first data type;

automatically displaying a second GUI element in the graphical program in place of the first GUI element in response to said determining that the first GUI element cannot display data of the first data type, wherein the second GUI element can display data of the first data type, wherein the first GUI element is no longer displayed; and

wherein the method is performed during creation of the graphical program and prior to execution of the graphical program.

129. (New) The method of claim 128, further comprising:

displaying the received data from the specified data source on the second GUI element.